Making State Government IT Consolidation Work for GIS in Louisiana

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2015 ESRI International Users’ Conference
July 22, 2015 – San Diego, Ca
In-Scope Agencies

Dept. of Children & Family Services
Dept. of Economic Development
Dept. of Education
Dept. of Environmental Quality
Dept. of Health And Hospitals
Dept. of Natural Resources
Dept. of Public Safety & Corrections
Dept. of Revenue
Dept. of Transportation & Development
Dept. of Veterans Affairs
Dept. of Wildlife & Fisheries
Division of Administrative Law
Executive Department

Division of Administration
Office of The State Inspector General
Louisiana Public Defender Board
Board of Tax Appeals
Office of Elderly Affairs
Louisiana State Racing Commission
Office of Financial Institutions
Office of Coastal Restoration & Protection
Workforce Commission
Youth Services, Office of Juvenile Justice

Agencies Headed by Elected Officials are Not Included in The IT Consolidation
Dept. of Agriculture
Dept. of Insurance
Dept. of Treasury
Secretory of State
Dept. of Culture, Recreation, Tourism
Public Service Comm.
Dept. of Higher Education
Goals of Louisiana’s IT Consolidation

• Efficiency
  – Reduce and optimize IT spending per unit by eliminating duplicative systems
  – Improve purchasing power by combining procurements

• Effectiveness
  – Improve ability to align IT resources with the business priorities of agencies
  – Improve reliability
  – Provide standard delivery of IT services

• Resource Sharing
  – Greater data sharing to reduce costs and improve services
  – Reduce dependence on redundant and duplicative systems, and processes
  – Strategic allocation of scarce human and financial resources

http://reinvent.la.gov
The Three “C’s” of Consolidation

1. Centralize
2. Centralize
3. Centralize

Chad McGee, Louisiana CIO, ca. 2003
Workgroups – Spanning the Enterprise

- Cloud Services
- Contract Analysis
- Desktop Leasing
- Disaster Recovery
- End User Computing (including Helpdesk & Desktop Support)
- Enterprise Data
- Enterprise Storage
- Floor Space Analysis
- Geographic Information Systems
- High Capacity Printing
- Mainframe Consolidation
- Managed Print
- Microsoft Licensing
- Network and Network Security
- Oracle Managed Service
- Organizational Chart
- Security
- Server Virtualizations
- Service Catalog Refinement
- Staff Survey
- Statewide Directory Services
- VoIP
- Workgroups Under Consideration
- Database Management
- Hardware Inventory
- Records Management Systems
- Software Inventory
- SQL Server as a Service
GIS is a Small Part of the Enterprise - So What is the Big Deal?

- GIS is a platform (Geography as a Platform)

- GIS links together other elements of the IT infrastructure
  - Databases
  - Web Services
  - Networks (LAN, WAN, Internet and Intranet)
  - Content Management
  - Enterprise Storage

- GIS needs to interact with Active Directory and security systems
What is Enterprise GIS?

• It is an environment in which everyone has access to GIS technology that they can use to do their work

• It is the technology infrastructure to share and support GIS resources inside and outside of the organization
  – Software
  – Hardware
  – Networks, etc.

• It is the People, Who “Do GIS”
  – Users who use the GIS environment to fulfil their agency’s mission
    • Use GIS technology to create and use GIS data to perform their job functions
  – IT GIS Professionals who maintain the GIS environment
    • Provide and maintain the infrastructure where the data and applications reside
    • Provide training and technical support to users
Where Does GIS Happen?

GIS happens in the hands of GIS users!
The GIS User Model

User Level Technology Stack

Primary Technology to serve each level of GIS users:

- **Thick Client** – ArcGIS Desktop
- **Thin Client** – ArcGIS Server and Custom Web apps
- **SaaS** – AGO, Software as a Service

**Yellow** – Less dominant technology
**Orange** – More dominant technology

(Updated from Mitchell and Kent, 2007 ESRI UC)
# GIS User Level Descriptions

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Level-0 – Casual User</strong></td>
<td>Want to see information on maps (visualization). Primarily consume GIS data. Very little direct interaction with data.</td>
</tr>
<tr>
<td><strong>Level-1 – Occasional User</strong></td>
<td>Job functions require visualization of geospatial data to perform their work. May need to perform basic GIS functions or analysis.</td>
</tr>
<tr>
<td><strong>Level-2 – Regular User</strong></td>
<td>Work requires use of geospatial data to solve problems that require GIS analysis. May create and edit geospatial data.</td>
</tr>
<tr>
<td><strong>Level-3 – Advanced User</strong></td>
<td>Work requires advanced GIS experience to create, edit, and/or model and analyze geospatial data to solve business problems or generate cartographic products.</td>
</tr>
<tr>
<td><strong>IT GS – IT Professionals with GIS Experience</strong></td>
<td>IT staff experiences with geospatial applications, data structures, data management, and GIS application development. These IT staff need to have experience using and applying GIS technology to solve business problems.</td>
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</tbody>
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Users will determine their own level, based on their job function and requirements.
Division of Labor

**GIS User Responsibilities**
- Data-Related Activities
  - Creating GIS Data
  - Managing GIS Data
  - Data Governance
- Cartography-Related Activities
  - Paper Map Production
  - Web Map Services Composition
  - Geospatial Visualization
- Analysis-Related Activities
  - Geospatial Analysis
  - Geospatial Modeling
  - Report Generation
- Enterprise-Related Activities
  - Manage AGO Users
  - Manage AGO Groups
  - Manage AGO Roles

**IT GIS Staff Responsibilities**
- Data-Related Activities
  - Database Administration and Maintenance
  - Database Replication
  - Data Services Creation and Administration
- Analysis-Related Activities
  - Geospatial Services implementation, sharing, and Administration
- Enterprise-Related Activities
  - Procurement
  - Enterprise Architecture
  - Enterprise Software Management
  - Enterprise Security
  - Implement Governance
  - Software License Administration
  - GIS Server Administration
  - GIS Web Services Administration
  - Technical Support and Training
Managing Expectations

• Half of the agencies think IT consolidation will take GIS away from them

• Half of the agencies think IT consolidation will give them GIS for free.

*BOTH* are wrong!
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<th><strong>Misconception</strong></th>
<th><strong>Fact</strong></th>
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<td>Now I will have someone to make maps for me.</td>
<td>No, if your business processes require maps, you need staff trained in your discipline to make them.</td>
</tr>
<tr>
<td>Now I will have access to GIS software that I could not afford to buy for myself.</td>
<td>No, there are many ways to share software. You will still have to pay for software you use.</td>
</tr>
<tr>
<td>Now I will have people who can perform GIS analysis and solve our business problems.</td>
<td>No, geospatial analysis, like statistics, BI, and other analytics are very discipline-specific. GIS analysts need to know the discipline in which they work.</td>
</tr>
<tr>
<td>Now, I don’t need to worry about creating any GIS data.</td>
<td>No, as the authoritative source, you will continue to be responsible for the GIS data from your discipline. It is your data, you control it.</td>
</tr>
</tbody>
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Benefits for GIS Users

• Efficiency † New Master Purchasing Agreement with ESRI will reduce software costs
  – Reduced IT spending
  – Improved purchasing power

• Effectiveness † More access to desktop, application, and technical support for agencies that had no GIS programs
  – Improved ability to align IT resources
  – Improved reliability
  – Standardized delivery of IT services

• Resource Sharing † A GIS infrastructure architecture that will provide reliable, up to date, server resources to maintain and share GIS resources through services (Service Oriented architecture)
  – Greater data sharing
  – Reduced redundant and duplicative systems
  – Strategic allocation of scarce human and financial resources
For More information on Louisiana’s GIS or IT Consolidation
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